

Kendrick, Bret

From: Humphrey, Marvelyn
Sent: Wednesday, August 31, 2016 7:13 PM
To: Allen, Bob (PCS)
Cc: Kendrick, Bret; latrice.babin@pcs.hctx.net
Subject: Highland Private Wells - Data Review Reports - 7-7-16 and 7-8-16 Resample Events
Attachments: Data Review Report 7-7-16 Resample Event.pdf; DST_7-7-16 Resample_WO#532975.xlsx; Data Review Report 7-8-16 Resample Event.pdf; DST_7-8-16 Resample_WO#533065.xlsx; Revised DR Reports 7-5-15 Resample Event.pdf; DST_7-5-16 Resample - ALS - WO#E1600665.xlsx; DST_7-5-16 Resample- Xenco -WO#532785.xlsx

Bob,
We have completed the review of all of the data from the Highlands Private Wells Project.

Please find attached the remaining data review reports (7-7-16 and 7-8-16 resample events).

Also attached are excel spreadsheets of the validated lab results and the revised reports of the 7-5-16 resample event.

Do not hesitate to contact me if you have any questions.

Marvelyn

Marvelyn Humphrey

Chief, Lab Support & External Oversight Section
Environmental Services Branch
US EPA Region 6 Laboratory
10625 Fallstone Road
Houston, TX 77099
office: 281-983-2140
humphrey.marvelyn@epa.gov

ATTACHMENT

**(Data Review Report – August 31, 2016
for Wells resampled on July 7, 2016)**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
ENVIRONMENTAL SERVICES BRANCH
10625 FALLSTONE ROAD
HOUSTON, TX 77099-4303

August 31, 2016

Mr. Bob Allen
Director
Harris County Pollution Control Services Department
John Phelps Courthouse Annex 4
101 South Richey, Suite H
Pasadena, TX 77506

Dear Mr. Allen:

The Environmental Services Assistance Team (ESAT), contractor to EPA Region 6 Environmental Services Branch, completed the review of the data from Xenco Laboratory for the Highlands Private Wells. The assessment of the data from the July 7, 2016 resample event is found in the enclosed data review report. If you have any questions regarding the data review report, please contact me at 281-983-2140.

Sincerely,

A handwritten signature in black ink, which appears to read "Marvelyn Humphrey", is written over the typed name.

Marvelyn Humphrey
Chief, Laboratory Support
and External Oversight Section

Enclosure:
Data Review Report

cc: Bret Kendrick
Superfund Project Manager
Risk and Site Assessment Section

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6
10625 Fallstone Road
Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE: August 29, 2016
TO: Marvelyn Humphrey, ESAT PO, Region 6 EPA
FROM: Ying-Ping Hsieh, Data Reviewer, ESAT *mh*
THRU: Dominic G. Jarecki, ESAT Program Manager, ESAT *DBJ*
SUBJECT: Data Review

Contract No.:	EP-W-13-026
TO No.:	002
Task/Sub-Task:	2-13
ESAT Doc. No.:	1602-213-0013
TDF No.:	6-16-297A
ESAT File No.:	O-1343

Attached is the data review summary for:

Site Highlands Private Wells
Date of Sampling 7/7/2016
WO # 532975

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 6
 HOUSTON BRANCH
 10625 FALLSTONE ROAD
 HOUSTON, TEXAS 77099
 ORGANIC REGIONAL DATA ASSESSMENT

Date of Sampling	7/7/2016	SITE	Highlands Private Wells
WO #	532975	NO. OF SAMPLES	23
LABORATORY	XENCO	MATRIX	Water
CONTRACT#	N/A	REVIEWER (IF NOT ESB)	ESAT
SOW#	Method 1613B	REVIEWER'S NAME	Ying-Ping Hsieh
Site ID#	A6NM	COMPLETION DATE	August 29, 2016

SAMPLE NO.	ES16010-008R	ES16010-033R	ES16010-056R	ES16010-090R
	ES16010-009R	ES16010-034R	ES16010-057R	ES16010-095R
	ES16010-010R	ES16010-040R	ES16010-059R	ES16010-099R
	ES16010-017R	ES16010-042R	ES16010-062R	DUP-11
	ES16010-027R	ES16010-049R	ES16010-082R	DUP-12
	ES16010-031R	ES16010-055R	ES16010-084R	

DATA ASSESSMENT SUMMARY

Dioxin/Furan

1. HOLDING TIMES	<u>0</u>
2. GC/MS TUNE/INSTR. PERFORM.	<u>0</u>
3. CALIBRATIONS	<u>0</u>
4. BLANKS	<u>0</u>
5. LABEL COMP./CLEANUP STD. RECOVERY	<u>0</u>
6. MATRIX SPIKE/DUPLICATE/LCS/OPR	<u>0</u>
7. OTHER QC	<u>N/A</u>
8. INTERNAL STANDARDS	<u>0</u>
9. COMPOUND ID/QUANTITATION	<u>0</u>
10. PERFORMANCE/COMPLETENESS	<u>0</u>
11. OVERALL ASSESSMENT	<u>0</u>

O = Data had no problems.

M = Data qualified because of major or minor problems.

Z = Data unacceptable.

NA = Not applicable.

ACTION ITEMS:

AREA OF CONCERN:

COMMENTS/CLARIFICATIONS
REGION 6 QA REVIEW

Date of Sampling 7/7/2016 WO # 532975 SITE Highlands Private Wells
LAB XENCO

COMMENTS: This data package consisted of 23 water samples for Dioxin/Furan analysis following EPA Method 1613B.

S4VEM Review was performed for this data package as requested by the Region. All PCDD/PCDF target compounds were reviewed. The target compound results were less than the laboratory Method Reporting Limits (MRLs). The target compound of concern is 2,3,7,8-TCDD. None of the samples contained 2,3,7,8-TCDD at a concentration above the laboratory MRL.

OVERALL ASSESSMENT: All results are acceptable. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the data package, and the audit results were reported on the Evidence Inventory Checklist. The DST included in this report is the final version.

ORGANIC ACRONYMS

%D	Percent Difference
%RSD	Percent Relative Standard Deviation
ARO	Aroclors
BFB	4-Bromofluorobenzene
BNA	Base/Neutral and Acid
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenylphosphine
DMC	Deuterated Monitoring Compound
DST	Data Summary Table
EDM	EXES Data Manager
GC/ECD	Gas Chromatograph/Electron Capture Detector
GC/MS	Gas Chromatograph/Mass Spectrometer
GPC	Gel Permeation Chromatography
IC	Initial Calibration
INDA (B,C)	Individual Standard Mixture A(or B or C)
IS	Internal Standard
LCS	Laboratory Control Sample
LMVOA	Low/Medium Volatile Organic Analysis
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NFG	National Functional Guidelines
OTR/COC	Organic Traffic Report/Chain of Custody
PAH	Polynuclear Aromatic Hydrocarbon
PE	Performance Evaluation
PEM	Performance Evaluation Mixture
PEST	Pesticides
QA	Quality Assurance
QC	Quality Control
QL	Quantitation Limit
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RRT	Relative Retention Time
RSCC	Regional Sample Control Center
RT	Retention Time
S3VEM	Stage 3 Validation Electronic and Manual (previously called Modified CADRE Review)
S4VEM	Stage 4 Validation Electronic and Manual (previously called Standard Review)
SDG	Sample Delivery Group
SDMC	Semivolatile Deuterated Monitoring Compound
SIM	Selected Ion Monitoring
SMO	Sample Management Office
SOW	Statement of Work
SQL	Sample Quantitation Limit
SVOA	Semivolatile Organic Analysis
TCL	Target Compound List
TCX	Tetrachloro-m-xylene
TIC	Tentatively Identified Compound
TVOA	Trace Volatile Organic Analysis
VDMC	Volatile Deuterated Monitoring Compound
VOA	Volatile Organic Analysis

HEADER DEFINITIONS FOR DIOXIN EXCEL DST

CASE: Case Number

SDG: SDG Number

EPASAMP: EPA Sample Number

LABID: Laboratory File/Sample ID

MATRIX: Sample Matrix

ANDATE: Sample Analysis Date

ANTIME: Sample Analysis Time

SPLEWT: Sample Weight

FINALVOL: Final Sample Extract Volume

CASNUM: Compound CAS Number

ANALYTE: Compound Name

CONC: Compound Concentration

VALDQAL: Region 6 Organic Data Validation Qualifier (see Organic Data Qualifier Definitions on the next page)

UNITS: Concentration Units

EMPC: Estimated Maximum Possible Concentration

EDL: Estimated Detection Limit

ADJMRL: Adjusted method reporting limit value

SMPDATE: Sampling Date

STATLOC: Station Location

Disclaimer: ESAT verified the accuracy of the information reported in the Excel DST only for the following data fields: CASE, SDG, EPASAMP, MATRIX, ANALYTE, CONC, UNITS, VALDQAL, and ADJCRQL. The data qualifiers in the VALDQAL column indicate the technical usability of the reported results.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U Not detected at reported quantitation limit.
- N Identification is tentative.
- J Estimated value.
- L Reported concentration is below the method reporting limit.
- M Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
- R Unusable.
- ^ High biased. Actual concentration may be lower than the concentration reported.
- ✓ Low biased. Actual concentration may be higher than the concentration reported.
- F+ A false positive exists.
- F- A false negative exists.
- UJ Estimated quantitation limit.
- T Identification is questionable because of absence of other commonly coexisting pesticides.
- C Identification of pesticide or Aroclor has been confirmed by Gas Chromatography/Mass Spectrometer (GC/MS).
- X Identification of pesticide or Aroclor could not be confirmed by GC/MS when attempted.
- * Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

Summary of Dioxins and Furans (with EPA Region 6 Data Review Qualifiers)

		2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,6,7,8-HxCDD	1,2,3,4,7,8-HxCDD	1,2,3,7,9,10-HxCDD	1,2,3,4,6,7,8-HpCDD	Octachlorodibenz-p-dioxin (OCDD)	2,3,7,8-Tetrachlorodibenzofuran	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF	Octachlorodibenzofuran (OCDF)	Total TEQ	
Sample ID	Date	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	
Residential	GW _{res}	30	30	300	300	300	3000	100000	300	1000	100	300	300	300	300	3000	3000	100000	30
Toxicity Equivalency Factor (TEF)		1.00	1.00	0.10	0.10	0.10	0.01	0.0003	0.10	0.03	0.30	0.10	0.10	0.10	0.01	0.01	0.0003		
ES16010-008R	7/7/2016	<0.151	<0.172	<0.316	<0.308	0.296 L J	<0.698	<3.59	<0.149	<0.355	<0.32	<0.221	<0.329	<1.01	<0.269	<0.605	<0.42	<1.36	0.57
ES16010-009R	7/7/2016	<0.249	<0.231	<0.113	<0.109	<0.193	<0.525	<0.87	<0.178	0.433 L J	<0.0921	<0.161	<0.0875	<0.807	<0.206	<0.159	<0.12	<0.861	0.44
ES16010-010R	7/7/2016	<0.372	0.347 L J	<0.238	<0.115	0.376 L J	<0.486	<1.41	<0.157	<0.539	<0.245	<0.119	<0.21	<0.905	<0.227	<0.364	<0.545	<0.544	1.04
ES16010-017R	7/7/2016	<0.199	<0.282	<0.17	<0.38	0.221 L J	<0.453	<0.893	<0.194	<0.56	<0.182	<0.169	<0.24	<0.759	<0.155	<0.43	<0.315	<0.479	0.54
ES16010-027R	7/7/2016	<0.315	0.312 L J	<0.194	<0.198	0.401 L J	<0.707	<1.35	0.149 L J	<0.386	<0.209	<0.173	<0.185	<0.837	<0.321	<0.408	<0.372	<0.621	0.96
ES16010-031R	7/7/2016	<0.156	<0.53	<0.238	<0.254	<0.173	<1.14	<8.44	<0.187	<0.113	<0.114	<0.107	<0.2	<0.728	<0.296	<0.294	<0.286	<0.704	0.84
ES16010-033R	7/7/2016	<0.213	<0.462	<0.185	<0.179	<0.305	<0.77	<2.76	<0.229	<0.348	<0.231	<0.276	<0.117	<0.782	<0.188	<0.377	<0.378	<0.83	0.86
ES16010-034R	7/7/2016	<0.145	<0.181	<0.138	<0.152	<0.2	<0.347	<4.52	<0.151	<0.439	<0.171	<0.262	<0.227	<0.949	<0.0922	<0.35	<0.347	<0.693	0.44
ES16010-040R	7/7/2016	<0.293	<0.77	<0.157	<0.246	<0.171	<0.794	<3.17	0.331 L J	0.575 L J	<0.249	<0.225	<0.176	<0.974	<0.449	<0.266	<0.238	<1.27	1.30
ES16010-042R	7/7/2016	<0.279	<0.463	<0.543	<0.257	<0.192	<0.826	<1.57	<0.209	<0.55	<0.357	<0.257	<0.257	<1.22	<0.323	<0.508	<0.655	<0.779	1.05
DUP-11	7/7/2016	<0.262	<0.214	<0.122	<0.115	<0.195	<0.277	<1.97	0.296 L J	0.282 L J	<0.107	<0.103	<0.173	<0.903	<0.104	<0.234	<0.128	<0.826	0.47
ES16010-049R	7/7/2016	<0.205	0.267 L J	<0.16	<0.119	<0.122	<0.752	<1.39	<0.115	<0.531	<0.277	<0.186	<0.161	<0.612	<0.256	<0.335	<0.258	<0.441	0.74
ES16010-055R	7/7/2016	<0.397	<0.215	<0.173	<0.278	0.192 L J	<0.865	<6.45	<0.165	<0.55	<0.357	<0.182	<0.195	<0.941	<0.229	<0.346	<0.554	<0.778	0.87
ES16010-058R																			
	7/7/2016	<0.128	<0.152	<0.151	<0.2	0.181 L J	<0.518	<1.11	<0.117	<0.45	<0.26	<0.072	<0.141	<0.755	<0.17	<0.356	<0.243	<0.618	0.42
ES16010-057R	7/7/2016	<0.275	<0.261	<0.138	<0.129	<0.131	<0.573	<1.72	0.217 L J	0.63 L J	<0.0976	<0.205	<0.214	<0.865	<0.172	<0.0414	<0.327	<1.17	0.52
ES16010-059R	7/7/2016	0.233 L J	<0.209	<0.236	<0.297	<0.352	<1.1	<1.45	0.215 L J	<0.0927	<0.204	<0.301	<0.187	<0.959	<0.352	<0.419	<0.518	<0.964	0.71
ES16010-062R	7/7/2016	0.536 L J	<0.696	<0.535	<0.496	<0.425	<1.08	<1.94	<0.165	<0.951	<0.789	<0.636	<0.543	<1.47	<0.71	<0.534	<1.08	<1.15	2.02
ES16010-082R	7/7/2016	<0.149	0.371 L J	<0.168	<0.165	0.191 L J	<0.573	<1.81	<0.199	<0.314	<0.102	<0.273	<0.204	<0.709	<0.167	<0.34	<0.268	<0.629	0.66
ES16010-084R	7/7/2016	0.334 L J	<0.239	<0.236	<0.136	<0.143	<0.656	<1.5	0.311 L J	<0.255	<0.128	<0.18	<0.0889	<0.845	<0.209	<0.343	<0.308	<0.54	0.71
ES16010-090R	7/7/2016	<0.206	<0.262	<0.271	<0.219	<0.372	<0.735	<7.65	<0.206	<0.138	<0.189	<0.212	<0.181	<0.943	<0.196	<0.409	<0.312	<0.745	0.56
ES16010-095R	7/7/2016	0.308 L J	<0.62	<0.321	<0.156	<0.483	<0.784	<9.08	<0.185	<0.474	<0.344	<0.132	<0.173	<0.941	<0.17	<0.321	<0.894	<0.894	1.31
ES16010-099R	7/7/2016	<0.285	<0.232	<0.188	<0.131	<0.21	<0.517	<0.819	<0.215	0.277 L J	<0.0953	<0.183	<0.0957	<0.717	<0.0934	<0.163	<0.291	<0.267	0.45
DUP-12	7/7/2016	<0.195	<0.165	<0.0881	<0.0833	<0.114	<0.307	<0.924	<0.138	0.245 L J	<0.298	<0.141	<0.127	<0.544	<0.0668	<0.158	<0.205	<0.446	0.40

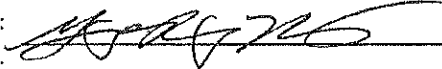
Notes:
 < Analyte was not detected at or above the reported sample detection limit
 L: Analyte was detected at the concentration less than the method reporting limit
 J: Estimated Value
 TEQ: Toxicity Equivalency Quotient

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

WO # <u>532975</u>	Date of Sampling <u>7/7/16</u>	SDG Nos. To Follow Mod. Ref No. _____	Date Rec. <u>8/12/16</u>
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EPA Lab ID: <u>XENCO</u> Lab Location: <u>Stafford, TX</u> Region: <u>6</u> Audit No.: <u>532975 (7/7/16)</u> Re_Submitted CSF? Yes No <u>X</u> Box No(s): <u>1</u> COMMENTS:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">ORIGINALS</th> <th style="width: 5%;">YES</th> <th style="width: 5%;">NO</th> <th style="width: 10%;">N/A</th> </tr> </thead> <tbody> <tr> <td colspan="4">CUSTODY SEALS</td> </tr> <tr> <td>1. Present on package?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>2. Intact upon receipt?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td colspan="4">FORM DC-2</td> </tr> <tr> <td>3. Numbering scheme accurate?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>4. Are enclosed documents listed?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>5. Are listed documents enclosed?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td colspan="4">FORM DC-1</td> </tr> <tr> <td>6. Present?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>7. Complete?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>8. Accurate?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td colspan="4">TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)</td> </tr> <tr> <td>9. Signed?</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>10. Dated?</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td colspan="4">AIRBILLS/AIRBILL STICKER</td> </tr> <tr> <td>11. Present?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>12. Signed?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>13. Dated?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td colspan="4">SAMPLE TAGS</td> </tr> <tr> <td>14. Does DC-1 list tags as being included?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>15. Present?</td> <td></td> <td></td> <td>X</td> </tr> <tr> <td colspan="4">OTHER DOCUMENTS</td> </tr> <tr> <td>16. Complete?</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>17. Legible?</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>18. Original?</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>18a. If "NO", does the copy indicate where original documents are located?</td> <td>X</td> <td></td> <td></td> </tr> </tbody> </table>	ORIGINALS	YES	NO	N/A	CUSTODY SEALS				1. Present on package?			X	2. Intact upon receipt?			X	FORM DC-2				3. Numbering scheme accurate?			X	4. Are enclosed documents listed?			X	5. Are listed documents enclosed?			X	FORM DC-1				6. Present?			X	7. Complete?			X	8. Accurate?			X	TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)				9. Signed?	X			10. Dated?	X			AIRBILLS/AIRBILL STICKER				11. Present?			X	12. Signed?			X	13. Dated?			X	SAMPLE TAGS				14. Does DC-1 list tags as being included?			X	15. Present?			X	OTHER DOCUMENTS				16. Complete?	X			17. Legible?	X			18. Original?		X		18a. If "NO", does the copy indicate where original documents are located?	X		
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Over for additional comments.

Audited by: 
 Audited by: _____
Signature

Ying-Ping Hsieh / ESAT Data Reviewer

Printed Name/Title

Date 8/23/16
 Date _____

DC-2__



Setting the Standard since 1990

Stafford, Texas (281-240-4200)

Dallas, Texas (214-902-0300)

Service Center - San Antonio, Texas (210-509-3334)

CHAIN OF CUSTODY

Page 1 of 3

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Xenco Quote #

Xenco Job #

532975

Client / Reporting Information		Project Information		Analytical Information												Matrix Codes
Company Name / Branch: INCONTROL TECHNOLOGIES		Project Name/Number: N. HIGHLANDS		<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 5px;">W. Discharge Dioxin</div> <div style="margin-left: 10px;"> <p>A= Air</p> <p>S= Soil/Sed/Solid</p> <p>GW=Ground Water</p> <p>OW= Drinking Water</p> <p>P= Product</p> <p>SW= Surface water</p> <p>SL= Sludge</p> <p>WW= Waste Water</p> <p>W= Wipe</p> <p>O= OR</p> <p>WW= Waste Water</p> </div> </div>												Field Comments
Company Address: 14731 PEBBLE BEND		Project Location:														
Email:	Phone No:	Invoice To: A. MARCON														
Project Contact: M. MARCON		PO Number:														
Samplers's Name: T. A. MARCON																
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of Bottles	HCl	NaOH/2n Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	None		
1	ES16010-003R		7.7.16	835	W	1									X	
2	ES16010-055R		7.7.16	855	W	1									X	
3	ES16010-027R		7.7.16	915	W	1									X	
4	ES16010-010R		7.7.16	935	W	1									X	
5	ES16010-056R		7.7.16	1005	W	1									X	
6	ES16010-017R		7.7.16	1020	W	1									X	
7	ES16010-019R		7.7.16	1035	W	1									X	
8	ES16010-002R		7.7.16	1050	W	1									X	
9	ES16010-062R		7.7.16	1100	W	1									X	
10	ES16010-051R		7.7.16	1120	W	1									X	
Turnaround Time (Business days)		Data Deliverable Information														
<input type="checkbox"/> Same Day TAT <input checked="" type="checkbox"/> 5 Day TAT		<input type="checkbox"/> Level II Std QC <input checked="" type="checkbox"/> Level IV (Full Data Pkg / raw data)														
<input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT		<input type="checkbox"/> Level III Std QC+ Forms <input checked="" type="checkbox"/> TRRP Level IV														
<input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> Contract TAT		<input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> UST / RG -411														
<input type="checkbox"/> 3 Day EMERGENCY		<input type="checkbox"/> TRRP Checklist														
TAT Starts Day received by Lab, if received by 3:00 pm		FED-EX / UPS Tracking #														
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																
Relinquished by Sampler:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:				
1		7.7.16 1620		1.		7.7.16 1615		2.		7.7.16 1810		2.				
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:				
3				3				4				4				
Relinquished by:		Date Time:		Received By:		Date Time:		Custody Seal #		Preserved where applicable		On Ice		Cooler Temp: 4.8 IR ID: HOU-025		
5				5								<input checked="" type="checkbox"/>		Corrected Temp: 5.1		

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously not



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Tampa, Florida (813-820-2000)

Xenco Quote #

Xenco Job #

532975

Client / Reporting Information		Project Information		Analytical Information												Matrix Codes	
Company Name / Branch: IN CONTRACT TECH.		Project Name/Number: N. Highlands		Dioxin TA Dioxin												A= Air S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge WW = Waste Water W = Wipe O = Oil WW = Waste Water	
Company Address: 4731 Pebble Bend		Project Location:															
Email:		Invoice To: A. MARCON															
Phone No:		PO Number:															
Project Contact: M. MARCON		Samplers's Name: T. AGUILAR															
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	NaOH	NONE	Field Comments		
1	ES16010 - 042R		7.2.16	1210	W	1										X	
2	ES16010 - 031R		7.2.16	1230	W	1										X	
3	ES16010 - 034R		7.2.16	1245	W	1										X	
4	ES16010 - 033R		7.2.16	1305	W	1										X	
5	ES16010 - 035R		7.2.16	1330	W	1										X	
6	ES16010 - 034R		7.2.16	1345	W	1										X	
7	ES16010 - 030R		7.2.16	1405	W	1										X	
8	ES16010 - 040R		7.2.16	1430	W	1										X	
9	ES16010 - 057R		7.2.16	1455	W	1										X	
10	ES16010 - 099R		7.2.16	1515	W	1										X	
Turnaround Time (Business days)		Data Deliverable Information														Notes:	
<input type="checkbox"/> Same Day TAT		<input checked="" type="checkbox"/> 5 Day TAT		<input type="checkbox"/> Level II Std QC		<input type="checkbox"/> Level IV (Full Data Pkg / raw data)											
<input type="checkbox"/> Next Day EMERGENCY		<input type="checkbox"/> 7 Day TAT		<input type="checkbox"/> Level III Std QC+ Forms		<input checked="" type="checkbox"/> TRRP Level IV											
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT		<input type="checkbox"/> Level I (CLP Forms)		<input type="checkbox"/> UST / RG -411											
<input type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist													
TAT Starts Day received by Lab, if received by 3:00 pm																FED-EX / UPS Tracking #	
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																	
Relinquished by Sampler		Date/Time:		Received By:		Date/Time:		Relinquished By:		Date/Time:		Received By:					
1		7.2.16/1610		1/16/2016 1515		1810 R-7-16		2		1810 R-7-16		2					
Relinquished by:		Date/Time:		Received By:		Date/Time:		Relinquished By:		Date/Time:		Received By:					
3				3				4				4					
Relinquished by:		Date/Time:		Received By:		Custody Seal #		Preserved where applicable		On Ice		Cool					
5				5													

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously noted.

Temp: 4.8 IR ID:HOU-025
C/F: +0.3
Corrected Temp: 5.1



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Xenco Job #

532975

Client / Reporting Information		Project Information		Analytical Information												Matrix Codes	
Company Name / Branch: INCENTRA TECH		Project Name/Number: N. Highlands		TEXAS												A = Air S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge WW = Waste Water W = Wipe O = Oil WW = Waste Water	
Company Address: 14731 PEBBLE BEND		Project Location:															
Email:		Invoice To: A. ARELON															
Phone No:		PO Number:															
Project Contact: M. MARLON		Samplers's Name: T. ARELON															
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NH4Cl/2% Acetate	INOC	H2SO4	NH4OH	NH4SO4	MESH	NONE	Field Comments		
1	B16010-001 R		7.7.16	1550	W	1										X	
2	DUP-011		7.7.16	800	W	1										X	
3	DUP-12		7.7.16	530	W	1										X	
4	PUMP BIK				W	1											
5																	
6																	
7																	
8																	
9																	
10																	
Turnaround Time (Business days)		Data Deliverable Information														Notes:	
<input type="checkbox"/> Same Day TAT		<input checked="" type="checkbox"/> 5 Day TAT		<input type="checkbox"/> Level II Std QC		<input checked="" type="checkbox"/> Level IV (Full Data Pkg / new data)											
<input type="checkbox"/> Next Day EMERGENCY		<input type="checkbox"/> 7 Day TAT		<input type="checkbox"/> Level III Std QC+ Forms		<input type="checkbox"/> TRRP Level IV											
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT		<input type="checkbox"/> Level 3 (CLP Forms)		<input type="checkbox"/> UST / RG -411											
<input type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist													
TAT Starts Day received by Lab, if received by 3:00 pm		FED-EX / UPS Tracking #															
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																	
Relinquished By: [Signature]		Date/Time: 7.7.16 1620		Received By: [Signature]		Date/Time: 7-7-16 1810		Relinquished By: [Signature]		Date/Time: 7-7-16		Received By: [Signature]					
Relinquished By:		Date/Time:		Received By:		Date/Time:		Relinquished By:		Date/Time:		Received By:					
Relinquished By:		Date/Time:		Received By:		Date/Time:		Custody Seal #		Preserved where applicable		On Ice		Cooler			
Relinquished By:		Date/Time:		Received By:		Date/Time:		Custody Seal #		Preserved where applicable		On Ice		Cooler			

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Temp: **4.8** ID: HOU-025
C/F: +0.3
Corrected Temp: **5.1**

ATTACHMENT

**(Data Review Report – August 31, 2016
for Wells resampled on July 8, 2016)**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
ENVIRONMENTAL SERVICES BRANCH
10625 FALLSTONE ROAD
HOUSTON, TX 77099-4303

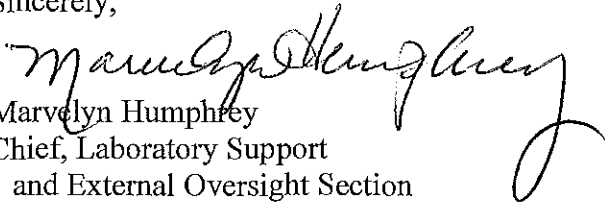
August 31, 2016

Mr. Bob Allen
Director
Harris County Pollution Control Services Department
John Phelps Courthouse Annex 4
101 South Richey, Suite H
Pasadena, TX 77506

Dear Mr. Allen:

The Environmental Services Assistance Team (ESAT), contractor to EPA Region 6 Environmental Services Branch, completed the review of the data from Xenco Laboratory for the Highlands Private Wells. The assessment of the data from the July 8, 2016 resample event is found in the enclosed data review report. If you have any questions regarding the data review report, please contact me at 281-983-2140.

Sincerely,


Marvelyn Humphrey
Chief, Laboratory Support
and External Oversight Section

Enclosure:
Data Review Report

cc: Bret Kendrick
Superfund Project Manager
Risk and Site Assessment Section

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6
10625 Fallstone Road
Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE: August 29, 2016
TO: Marvelyn Humphrey, ESAT PO, Region 6 EPA
FROM: Wallace Doong, Data Reviewer, ESAT *WD*
THRU: Dominic G. Jarecki, ESAT Program Manager, ESAT *DGJ*
SUBJECT: Data Review

Contract No.:	EP-W-13-026
TO No.:	002
Task/Sub-Task:	2-13
ESAT Doc. No.:	1602-213-0012
TDF No.:	6-16-298A
ESAT File No.:	O-1345

Attached is the data review summary for:

Site Highlands Private Wells
Date of Sampling 7/8/2016
WO # 533065

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099
ORGANIC REGIONAL DATA ASSESSMENT

Date of Sampling	7/8/2016	SITE	Highlands Private Wells
WO #	533065	NO. OF SAMPLES	4
LABORATORY	XENCO	MATRIX	Water
CONTRACT#	N/A	REVIEWER (IF NOT ESB)	ESAT
SOW#	Method 1613B	REVIEWER'S NAME	Wallace Doong
Site ID#	A6NM	COMPLETION DATE	August 29, 2016

SAMPLE NO.	ES16010-029R		
	ES16010-064R		
	ES16010-089R		
	ES16010-098R		

DATA ASSESSMENT SUMMARY

Dioxin/Furan

1. HOLDING TIMES	<u>O</u>
2. GC/MS TUNE/INSTR. PERFORM.	<u>O</u>
3. CALIBRATIONS	<u>O</u>
4. BLANKS	<u>O</u>
5. LABEL COMP./CLEANUP STD. RECOVERY	<u>O</u>
6. MATRIX SPIKE/DUPLICATE/LCS/OPR	<u>O</u>
7. OTHER QC	<u>N/A</u>
8. INTERNAL STANDARDS	<u>O</u>
9. COMPOUND ID/QUANTITATION	<u>O</u>
10. PERFORMANCE/COMPLETENESS	<u>O</u>
11. OVERALL ASSESSMENT	<u>O</u>

O = Data had no problems.

M = Data qualified because of major or minor problems.

Z = Data unacceptable.

NA = Not applicable.

ACTION ITEMS:

AREA OF CONCERN:

COMMENTS/CLARIFICATIONS
REGION 6 QA REVIEW

Date of Sampling 7/8/2016 WO # 533065 SITE Highlands Private Wells
LAB XENCO

COMMENTS: This data package consisted of four water samples for Dioxin/Furan analysis following EPA Method 1613B.

S4VEM Review was performed for this data package as requested by the Region. All PCDD/PCDF target compounds were reviewed. The target compound results were less than the laboratory Method Reporting Limits (MRLs). The target compound of concern is 2,3,7,8-TCDD. None of the samples contained 2,3,7,8-TCDD at a concentration above the laboratory MRL.

OVERALL ASSESSMENT: All results are acceptable. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the data package, and the audit results were reported on the Evidence Inventory Checklist. The DST included in this report is the final version.

ORGANIC ACRONYMS

%D	Percent Difference
%RSD	Percent Relative Standard Deviation
ARO	Aroclors
BFB	4-Bromofluorobenzene
BNA	Base/Neutral and Acid
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
DCB	Decachlorobiphenyl
DFTFP	Decafluorotriphenylphosphine
DMC	Deuterated Monitoring Compound
DST	Data Summary Table
EDM	EXES Data Manager
GC/ECD	Gas Chromatograph/Electron Capture Detector
GC/MS	Gas Chromatograph/Mass Spectrometer
GPC	Gel Permeation Chromatography
IC	Initial Calibration
INDA(B,C)	Individual Standard Mixture A(or B or C)
IS	Internal Standard
LCS	Laboratory Control Sample
LMVOA	Low/Medium Volatile Organic Analysis
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NFG	National Functional Guidelines
OTR/COC	Organic Traffic Report/Chain of Custody
PAH	Polynuclear Aromatic Hydrocarbon
PE	Performance Evaluation
PEM	Performance Evaluation Mixture
PEST	Pesticides
QA	Quality Assurance
QC	Quality Control
QL	Quantitation Limit
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RRT	Relative Retention Time
RSCC	Regional Sample Control Center
RT	Retention Time
S3VEM	Stage 3 Validation Electronic and Manual (previously called Modified CADRE Review)
S4VEM	Stage 4 Validation Electronic and Manual (previously called Standard Review)
SDG	Sample Delivery Group
SDMC	Semivolatile Deuterated Monitoring Compound
SIM	Selected Ion Monitoring
SMO	Sample Management Office
SOW	Statement of Work
SQL	Sample Quantitation Limit
SVOA	Semivolatile Organic Analysis
TCL	Target Compound List
TCX	Tetrachloro-m-xylene
TIC	Tentatively Identified Compound
TVOA	Trace Volatile Organic Analysis
VDMC	Volatile Deuterated Monitoring Compound
VOA	Volatile Organic Analysis

HEADER DEFINITIONS FOR DIOXIN EXCEL DST

CASE:	Case Number
SDG:	SDG Number
EPASAMP:	EPA Sample Number
LABID:	Laboratory File/Sample ID
MATRIX:	Sample Matrix
ANDATE:	Sample Analysis Date
ANTIME:	Sample Analysis Time
SPLEWT:	Sample Weight
FINALVOL:	Final Sample Extract Volume
CASNUM:	Compound CAS Number
ANALYTE:	Compound Name
CONC:	Compound Concentration
VALDQAL:	Region 6 Organic Data Validation Qualifier (see Organic Data Qualifier Definitions on the next page)
UNITS:	Concentration Units
EMPC:	Estimated Maximum Possible Concentration
EDL:	Estimated Detection Limit
ADJMRL:	Adjusted method reporting limit value
SMPDATE:	Sampling Date
STATLOC:	Station Location

Disclaimer: ESAT verified the accuracy of the information reported in the Excel DST only for the following data fields: CASE, SDG, EPASAMP, MATRIX, ANALYTE, CONC, UNITS, VALDQAL, and ADJCRL. The data qualifiers in the VALDQAL column indicate the technical usability of the reported results.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U Not detected at reported quantitation limit.
- N Identification is tentative.
- J Estimated value.
- L Reported concentration is below the method reporting limit.
- M Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
- R Unusable.
- ^ High biased. Actual concentration may be lower than the concentration reported.
- ✓ Low biased. Actual concentration may be higher than the concentration reported.
- F+ A false positive exists.
- F- A false negative exists.
- UJ Estimated quantitation limit.
- T Identification is questionable because of absence of other commonly coexisting pesticides.
- C Identification of pesticide or Aroclor has been confirmed by Gas Chromatography/Mass Spectrometer (GC/MS).
- X Identification of pesticide or Aroclor could not be confirmed by GC/MS when attempted.
- * Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

Summary of Dioxins and Furans (with EPA Region 6 Data Review Qualifiers)

		2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,6,7,8-HxCDD	1,2,3,4,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD	Octachlorodibenzo-p-dioxin (OCDD)	2,3,7,8-Tetrachlorodibenzofuran	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	Octachlorodibenzofuran (OCDF)	Total TEQ
Sample ID	Date	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L
Residential	GW ₁₀	30	30	300	300	300	3000	100000	300	1000	100	300	300	300	300	3000	3000	100000
Toxicity Equivalency Factor (TEF)		1.00	1.00	0.10	0.10	0.10	0.01	0.0003	0.10	0.03	0.30	0.10	0.10	0.10	0.10	0.01	0.01	0.0003
ES16010-029R	7/8/2016	<0.242	<0.228	<0.162	<0.11	<0.464	<0.502	<1.34	<0.176	0.12 LJ	<0.317	<0.302	<0.101	<0.904	<0.165	<0.385	<0.318	<0.776
ES16010-064R	7/8/2016	<0.242	<0.334	<0.222	<0.107	<0.118	<0.533	<1.19	<0.156	0.485 LJ	<0.0942	<0.243	<0.236	<0.639	<0.0871	<0.315	<0.275	<0.583
ES16010-089R	7/8/2016	<0.233	<0.206	<0.167	<0.171	<0.589	<0.781	<1.42	<0.148	<0.0729	<0.468	<0.195	<0.279	<0.793	<0.303	<0.101	<0.526	<0.883
ES16010-098R	7/8/2016	<0.354	<0.244	<0.141	<0.0972	<0.101	<0.159	<0.976	<0.165	0.267 LJ	<0.0903	<0.0739	<0.227	<0.654	<0.0747	<0.211	<0.137	<0.142

Notes:

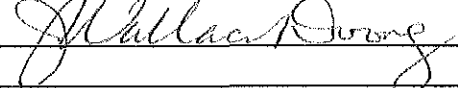
- <: Analyte was not detected at or above the reported sample detection limit
- L: Analyte was detected at the concentration less than the method reporting limit
- J: Estimated value
- TEQ: Toxicity Equivalency Quotient

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

WO # 533065 Date of Sampling 7/8/16 SDG Nos. To Follow _____ Mod. Ref No. _____ Date Rec. 8/12/16

EPA Lab ID: <u>XENCO</u>	ORIGINALS	YES	NO	N/A
Lab Location: <u>Stafford, TX</u>	CUSTODY SEALS			
Region: <u>6</u> Audit No.: <u>533065 (7/8/16)</u>	1. Present on package?			X
Re_Submitted CSF? Yes _____ No <u>X</u>	2. Intact upon receipt?			X
Box No(s): <u>1</u>	FORM DC-2			
COMMENTS:	3. Numbering scheme accurate?			X
	4. Are enclosed documents listed?			X
	5. Are listed documents enclosed?			X
	FORM DC-1			
	6. Present?			X
	7. Complete?			X
	8. Accurate?			X
	TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)			
	9. Signed?	X		
	10. Dated?	X		
	AIRBILLS/AIRBILL STICKER			
	11. Present?			X
	12. Signed?			X
	13. Dated?			X
	SAMPLE TAGS			
14. Does DC-1 list tags as being included?			X	
15. Present?			X	
OTHER DOCUMENTS				
16. Complete?	X			
17. Legible?	X			
18. Original?		X		
18a. If "NO", does the copy indicate where original documents are located?	X			

Over for additional comments.

Audited by: 
 Audited by: _____
 Signature

Wallace Doong / ESAT Data Reviewer

Printed Name/Title

Date 8/23/16

Date _____

DC-2__



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Lakeland, Florida (863-646-8526)

Norcross, Georgia (770-449-8800)

Tampa, Florida (813-620-2000)

www.xenco.com

Xenco Quote #

Xenco Job #

533065

Client / Reporting Information										Project Information										Analytical Information										Matrix Codes									
Company Name / Branch: INTEGRAL TECHNOLOGIES										Project Name/Number: N. Highlands										<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 10px;">SIX</div> <div> <p>A= Air</p> <p>S = Soil/Sed/Solid</p> <p>GW = Ground Water</p> <p>DW = Drinking Water</p> <p>P = Product</p> <p>SW = Surface water</p> <p>SL = Sludge</p> <p>WW = Waste Water</p> <p>W = Wipe</p> <p>O = Oil</p> <p>WW= Waste Water</p> </div> </div>										<p>Field Comments</p>									
Company Address: 14731 PEBBLE BEND										Project Location:																													
Email:										Phone No:																													
Project Contact: M. MARCON										Invoice To: A. MARCON																													
Samplers's Name: T. ARINGTON										PO Number:																													
No.	Field ID / Point of Collection				Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/2n Acetate	HNO3	H2SO4	NaOH	NaHCO4	MEOH	NONE																						
1	ES16010-098R					7.5.16	900	W	1										X																				
2	ES16010-064R					7.5.16	930	W	1										X																				
3	ES16010-064R					7.5.16	910	W	1										X																				
4	ES16010-064R					7.5.16	950	W	1										X																				
5																																							
6																																							
7																																							
8																																							
9																																							
10																																							
Turnaround Time (Business days)										Data Deliverable Information										Notes																			
<input type="checkbox"/> Same Day TAT <input checked="" type="checkbox"/> 5 Day TAT										<input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level IV (Full Data Pkg /raw data)																													
<input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT										<input type="checkbox"/> Level III Std QC+ Forms <input checked="" type="checkbox"/> TRRP Level IV																													
<input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> Contract TAT										<input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> UST / RG -111																													
<input type="checkbox"/> 3 Day EMERGENCY										<input type="checkbox"/> TRRP Checklist																													
TAT Starts Day received by Lab, if received by 3:00 pm										FED-EX / UPS Tracking #																													
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																																							
Relinquished by Sampler:										Date Time:					Received By:					Date Time:					Received By:														
1										7.5.16					1.8.16					7.5.16					1.8.16														
Relinquished by:										Date Time:					Received By:					Date Time:					Received By:														
3																																							
Relinquished by:										Date Time:					Received By:					Date Time:					Received By:														
5																																							
Custody Seal #										Preserved where applicable										On Ice																			

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously...

Cor Temp: 1.8
C/R: +0.3
Corrected Temp: 2.1
IR ID: HOU-025

ATTACHMENT

**(Revised Data Review Reports – August 31, 2016
for Wells resampled on July 5, 2016)**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
ENVIRONMENTAL SERVICES BRANCH
10625 FALLSTONE ROAD
HOUSTON, TX 77099-4303

August 31, 2016

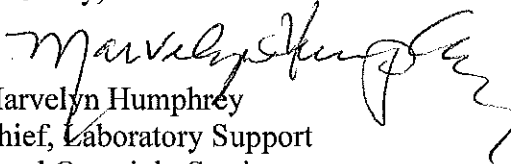
Mr. Bob Allen
Director
Harris County Pollution Control Services Department
John Phelps Courthouse Annex 4
101 South Richey, Suite H
Pasadena, TX 77506

Dear Mr. Allen:

Enclosed are the revised data review reports of the Highland Private Wells July 5, 2016 resampling events. The reports were revised to include the date of resampling and to update the project number of the Xenco Laboratories report. The project number of the Xenco report was changed from ES16010 to 532785. In addition, the data review summary tables were reformatted. No other changes were made.

If you have any questions regarding the reports, please contact me at (281) 983-2140.

Sincerely,


Marvelyn Humphrey
Chief, Laboratory Support
and Oversight Section

Enclosure:
Data Review Reports (2)

cc:Bret Kendrick
Superfund Project Manager
Risk and Site Assessment Section

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6
10625 Fallstone Road
Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE: August 26, 2016

TO: Marvelyn Humphrey, ESAT PO, Region 6 EPA

FROM: Wallace Doong, Data Reviewer, ESAT ^{WJ}

THRU: Dominic G. Jarecki, ESAT Program Manager, ESAT ¹²⁶³

SUBJECT: Data Review

Contract No.:	EP-W-13-026
TO No.:	002
Task/Sub-Task:	2-13
ESAT Doc. No.:	1602-213-0011
TDF No.:	6-16-274A/6-16-300A
ESAT File No.:	O-1337

Attached is the data review summary for:

Site Highlands Private Wells
Date of Sampling 7/5/2016
WO # 532785

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099
ORGANIC REGIONAL DATA ASSESSMENT

Date of Sampling	7/5/2016	SITE	Highlands Private Wells
WO #	532785	NO. OF SAMPLES	5
LABORATORY	XENCO	MATRIX	Water
CONTRACT#	N/A	REVIEWER (IF NOT ESB)	ESAT
SOW#	Method 1613B	REVIEWER'S NAME	Wallace Doong
Site ID#	A6NM	COMPLETION DATE	August 26, 2016

SAMPLE NO.	ES16010-012R	ES16010-093R	
	ES16010-056R		
	ES16010-071R		
	ES16010-091R		

DATA ASSESSMENT SUMMARY

Dioxin/Furan

1. HOLDING TIMES	<u>0</u>
2. GC/MS TUNE/INSTR. PERFORM.	<u>0</u>
3. CALIBRATIONS	<u>0</u>
4. BLANKS	<u>0</u>
5. LABEL COMP./CLEANUP STD. RECOVERY	<u>0</u>
6. MATRIX SPIKE/DUPLICATE/LCS/OPR	<u>0</u>
7. OTHER QC	<u>N/A</u>
8. INTERNAL STANDARDS	<u>0</u>
9. COMPOUND ID/QUANTITATION	<u>0</u>
10. PERFORMANCE/COMPLETENESS	<u>0</u>
11. OVERALL ASSESSMENT	<u>0</u>

O = Data had no problems.

M = Data qualified because of major or minor problems.

Z = Data unacceptable.

NA = Not applicable.

ACTION ITEMS:

AREA OF CONCERN:

COMMENTS/CLARIFICATIONS
REGION 6 QA REVIEW

Date of Sampling 7/5/2016 WO # 532785 SITE Highlands Private Wells
LAB XENCO

COMMENTS: This data package consisted of five water samples for Dioxin/Furan analysis following EPA Method 1613B.

S4VEM Review was performed for this data package as requested by the Region. All PCDD/PCDF target compounds were reviewed. The target compound results were less than the laboratory Method Reporting Limits (MRLs). The target compound of concern is 2,3,7,8-TCDD. None of the samples contained 2,3,7,8-TCDD at a concentration above the laboratory MRL.

OVERALL ASSESSMENT: All results are acceptable. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the data package, and the audit results were reported on the Evidence Inventory Checklist. The DST included in this report is the final version.

ORGANIC ACRONYMS

%D	Percent Difference
%RSD	Percent Relative Standard Deviation
ARO	Aroclors
BFB	4-Bromofluorobenzene
BNA	Base/Neutral and Acid
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenylphosphine
DMC	Deuterated Monitoring Compound
DST	Data Summary Table
EDM	EXES Data Manager
GC/ECD	Gas Chromatograph/Electron Capture Detector
GC/MS	Gas Chromatograph/Mass Spectrometer
GPC	Gel Permeation Chromatography
IC	Initial Calibration
INDA(B,C)	Individual Standard Mixture A(or B or C)
IS	Internal Standard
LCS	Laboratory Control Sample
LMVOA	Low/Medium Volatile Organic Analysis
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NFG	National Functional Guidelines
OTR/COC	Organic Traffic Report/Chain of Custody
PAH	Polynuclear Aromatic Hydrocarbon
PE	Performance Evaluation
PEM	Performance Evaluation Mixture
PEST	Pesticides
QA	Quality Assurance
QC	Quality Control
QL	Quantitation Limit
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RRT	Relative Retention Time
RSCC	Regional Sample Control Center
RT	Retention Time
S3VEM	Stage 3 Validation Electronic and Manual (previously called Modified CADRE Review)
S4VEM	Stage 4 Validation Electronic and Manual (previously called Standard Review)
SDG	Sample Delivery Group
SDMC	Semivolatile Deuterated Monitoring Compound
SIM	Selected Ion Monitoring
SMO	Sample Management Office
SOW	Statement of Work
SQL	Sample Quantitation Limit
SVOA	Semivolatile Organic Analysis
TCL	Target Compound List
TCX	Tetrachloro-m-xylene
TIC	Tentatively Identified Compound
TVOA	Trace Volatile Organic Analysis
VDMC	Volatile Deuterated Monitoring Compound
VOA	Volatile Organic Analysis

HEADER DEFINITIONS FOR DIOXIN EXCEL DST

CASE:	Case Number
SDG:	SDG Number
EPASAMP:	EPA Sample Number
LABID:	Laboratory File/Sample ID
MATRIX:	Sample Matrix
ANDATE:	Sample Analysis Date
ANTIME:	Sample Analysis Time
SPLEWT:	Sample Weight
FINALVOL:	Final Sample Extract Volume
CASNUM:	Compound CAS Number
ANALYTE:	Compound Name
CONC:	Compound Concentration
VALDQAL:	Region 6 Organic Data Validation Qualifier (see Organic Data Qualifier Definitions on the next page)
UNITS:	Concentration Units
EMPC:	Estimated Maximum Possible Concentration
EDL:	Estimated Detection Limit
ADJMRL:	Adjusted method reporting limit value
SMPDATE:	Sampling Date
STATLOC:	Station Location

Disclaimer: ESAT verified the accuracy of the information reported in the Excel DST only for the following data fields: CASE, SDG, EPASAMP, MATRIX, ANALYTE, CONC, UNITS, VALDQAL, and ADJCRQL. The data qualifiers in the VALDQAL column indicate the technical usability of the reported results.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U Not detected at reported quantitation limit.
- N Identification is tentative.
- J Estimated value.
- L Reported concentration is below the method reporting limit.
- M Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
- R Unusable.
- ^ High biased. Actual concentration may be lower than the concentration reported.
- ✓ Low biased. Actual concentration may be higher than the concentration reported.
- F+ A false positive exists.
- F- A false negative exists.
- UJ Estimated quantitation limit.
- T Identification is questionable because of absence of other commonly coexisting pesticides.
- C Identification of pesticide or Aroclor has been confirmed by Gas Chromatography/Mass Spectrometer (GC/MS).
- X Identification of pesticide or Aroclor could not be confirmed by GC/MS when attempted.
- * Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.



38150 1680584 5465733

Sample SUB-Contract#: 1035434

Page 1 of 1

Date Printed: 07.07.2016 18:14

Date/Time: 07.05.2016 14:23

Created by: Tanya Torres

Send report to: Debbie Simmons

Subcontractor: Burofins Eaton Analytical, Inc.

Address: 4147 Greenbriar Dr.

PO#: 532785

Phone: Stafford, TX 77477

Delivery Priority:

E-Mail: debbie.simmons@xenco.com

Air Bill No.:

Due Date: 07.12.2016

Invoice To: apInvoices@xenco.com; subcontract@xenco.com; debbie.simmons@xenco.com

Sample Id	Client Sample Id	Cont #	Matrix	Sample Collection	Method	Method Name	Lab PM
532785-002	ES16010-012R	5950	W	07/05/16 09:55	E1613	Dioxins & Furans by EPA 1613	Debbie Simmons
532785-003	ES16010-013R	5951	W	07/05/16 11:00	E1613	Dioxins & Furans by EPA 1613	Debbie Simmons
532785-004	ES16010-014R	5952	W	07/05/16 11:00	E1613	Dioxins & Furans by EPA 1613	Debbie Simmons
532785-005	ES16010-015R	5953	W	07/05/16 11:00	E1613	Dioxins & Furans by EPA 1613	Debbie Simmons
532785-006	ES16010-016R	5954	W	07/05/16 11:00	E1613	Dioxins & Furans by EPA 1613	Debbie Simmons
532785-007	ES16010-017R	5955	W	07/05/16 12:45	E5252	SVOCs by EPA 5252	Debbie Simmons

SUB-Contracting Comments:

5 DAY Turn needed.

Full List PCDD's/PCDF'S

Replacement for broke sample

Relinquished By:

Mike Kimmel

Received By:

Date/ Time Relinquished:

07/05/2016

19:25 AM

Date/ Time Received:

Relinquished By:

Received By:

Date/ Time Relinquished:

Date/ Time Received:

7-8-16 @ 1000

Cooler Temperature:

3.5



Page 1 of 1

Tampa, Florida (813-620-2000)

Xenon Job #

632485-1

WWW.XEPCO.COM

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes	
Company Name / Branch: INCONTROL TECH		Project Name/Number: HIGHLANDS				A= Air S = Soil/Sed/Solid GW =Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge WW= Waste Water W = Wipe O = Oil WW= Waste Water	
Company Address: 14731 Pebble Bend		Project Location: HIGHLANDS, TEXAS					
Email: mmarcon@incontroltech.com		Invoice To: ICT					
Project Contact:		PO Number:					
Samplers Name: Michael Marcon							
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	Field Comments
1	ES16010-085R		7-5	9:28	DW	2	
2	ES16010-012R		7-5	9:55		1	
3	ES16010-071R		7-5	10:00		1	
4	ES16010-093R		7-5	11:20		1	
5	ES16010-091R		7-5	12:10		1	
6	ES16010-056R		7-5	12:45		3	
7							
8							
9							
10							
Turnaround Time (Business days)		Data Deliverable Information		Notes:			
<input type="checkbox"/> Same Day TAT <input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 3 Day EMERGENCY		<input checked="" type="checkbox"/> 5 Day TAT <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> Contract TAT		<input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> Level 3 (CLP Forms) <input type="checkbox"/> TRRP Checklist		<input type="checkbox"/> Level IV (Full Data Pkg/rsw data) <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> LST / RG -411	
TAT Starts Day received by Lab, if received by 3:00 pm				FED-EX / UPS: Tracking #			
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY							
Relinquished by: <i>[Signature]</i>		Date/Time: 7/5/2016 12:45		Received By: <i>[Signature]</i>		Date/Time: 07-05-2016	
Relinquished by:		Date/Time:		Received By:		Date/Time:	
3		3		4		4	
Relinquished by:		Date/Time:		Received By:		Date/Time:	
5		5		Custody Seal #		Preserved where applicable	
						On Ice <input checked="" type="checkbox"/> Cooler Temp. 5.0°C Thermo. Corr. Factor 5.3%	

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.

Page 9 of 992

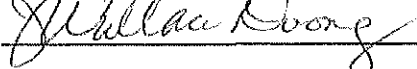
Final 1.00-

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

WO # 532785 Date of Sampling 7/5/16 SDG Nos. To Follow _____ Mod. Ref No. _____ Date Rec. 7/26/16

EPA Lab ID: <u>XENCO</u> Lab Location: <u>Stafford, TX</u> Region: <u>6</u> Audit No.: <u>532785 (7/5/16)</u> Re_Submitted CSF? Yes No <u>X</u> Box No(s): <u>1</u> COMMENTS:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">ORIGINALS</th> <th style="width: 5%;">YES</th> <th style="width: 5%;">NO</th> <th style="width: 10%;">N/A</th> </tr> </thead> <tbody> <tr> <td colspan="4">CUSTODY SEALS</td> </tr> <tr> <td>1. Present on package?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>2. Intact upon receipt?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td colspan="4">FORM DC-2</td> </tr> <tr> <td>3. Numbering scheme accurate?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>4. Are enclosed documents listed?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>5. Are listed documents enclosed?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td colspan="4">FORM DC-1</td> </tr> <tr> <td>6. Present?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>7. Complete?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>8. Accurate?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td colspan="4">TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)</td> </tr> <tr> <td>9. Signed?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>10. Dated?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td colspan="4">AIRBILLS/AIRBILL STICKER</td> </tr> <tr> <td>11. Present?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>12. Signed?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>13. Dated?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td colspan="4">SAMPLE TAGS</td> </tr> <tr> <td>14. Does DC-1 list tags as being included?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>15. Present?</td> <td></td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td colspan="4">OTHER DOCUMENTS</td> </tr> <tr> <td>16. Complete?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>17. Legible?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>18. Original?</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>18a. If "NO", does the copy indicate where original documents are located?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> </tbody> </table>	ORIGINALS	YES	NO	N/A	CUSTODY SEALS				1. Present on package?			X	2. Intact upon receipt?			X	FORM DC-2				3. Numbering scheme accurate?			X	4. Are enclosed documents listed?			X	5. Are listed documents enclosed?			X	FORM DC-1				6. Present?			X	7. Complete?			X	8. Accurate?			X	TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)				9. Signed?	X			10. Dated?	X			AIRBILLS/AIRBILL STICKER				11. Present?			X	12. Signed?			X	13. Dated?			X	SAMPLE TAGS				14. Does DC-1 list tags as being included?			X	15. Present?			X	OTHER DOCUMENTS				16. Complete?	X			17. Legible?	X			18. Original?		X		18a. If "NO", does the copy indicate where original documents are located?	X		
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18a. If "NO", does the copy indicate where original documents are located?	X																																																																																																												

Over for additional comments.

Audited by: 
 Audited by: _____
Signature

Wallace Doong / ESAT Data Reviewer

Printed Name/Title

Date 7/27/16
 Date _____

DC-2 _____

Summary of Dioxins and Furans (with EPA Region 6 Data Review Qualifiers)

Sample ID	Date	2,3,7,8-TCDD	1,2,3,7,8-PeCDD	1,2,3,6,7,8-HxCDD	1,2,3,4,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDD	Octachlorodibenzo-p-dioxin (OCDD)	2,3,7,8-Tetrachlorodibenzofura	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF	Octachlorodibenzofuran (OCDF)	Total TEQ
Residential	^{uw} GW _{avg}	30	30	300	300	300	3000	100000	300	1000	100	300	300	300	300	3000	3000	100000	30
Toxicity Equivalency Factor (TEF)		1.00	1.00	0.10	0.10	0.10	0.01	0.0003	0.10	0.03	0.30	0.10	0.10	0.10	0.01	0.01	0.01	0.0003	
ES16010-012R	7/7/2016	<0.352	<0.277	<0.145	<0.145	<0.152	<0.913	<0.906	<0.241	<0.111	<0.209	<0.145	<0.246	<0.68	<0.157	<0.331	<0.356	<0.499	0.73
ES16010-056R	7/5/2016	<0.302	<0.804	<0.664	<0.5	<0.357	<1.17	<1.93	<0.299	<0.717	<0.978	<0.331	<0.618	<1.26	<0.662	<0.806	<0.822	<1.3	1.75
ES16010-071R	7/5/2016	<0.369	<0.395	<0.234	<0.212	<0.231	<0.693	<2.37	<0.386	<0.413	<0.293	<0.352	<0.358	<0.582	<0.327	<0.403	<0.274	<0.843	0.72
ES16010-091R	7/5/2016	<0.586	<0.367	<0.242	<0.249	<0.254	<1.79	<9.85	<0.331	<0.339	<0.288	<0.167	<0.175	<0.506	<0.177	<0.343	<0.282	<0.919	1.20
ES16010-093R	7/5/2016	<0.418	<0.407	<0.409	<0.456	<0.355	<0.864	<2.45	<0.473	<0.688	<0.546	<0.475	<0.154	<0.836	<0.257	<0.6	<0.225	<0.99	0.95

Notes:

<: Analyte was not detected at or above the reported sample detection limit
 L: Analyte was detected at the concentration less than the method reporting limit
 E: Estimated value
 TEQ: Toxicity Equivalency Quotient

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6
10625 Fallstone Road
Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE: August 26, 2016

TO: Marvelyn Humphrey, ESAT PO, Region 6 EPA

FROM: Wallace Doong, Data Reviewer, ESAT ^{WD}

THRU: Dominic G. Jarecki, ESAT Program Manager, ESAT ⁰⁶³

SUBJECT: Data Review

Contract No.:	EP-W-13-026
TO No.:	002
Task/Sub-Task:	2-13
ESAT Doc. No.:	1602-213-0010
TDF No.:	6-16-259A/6-16-300A
ESAT File No.:	O-1334

Attached is the data review summary for:

Site Highlands Private Wells
Date of Sampling 7/5/2016
WO # E1600665

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099
ORGANIC REGIONAL DATA ASSESSMENT

Date of Sampling	7/5/2016	SITE	Highlands Private Wells
WO #	E1600665	NO. OF SAMPLES	4
LABORATORY	ALS	MATRIX	Water
CONTRACT#	N/A	REVIEWER (IF NOT ESB)	ESAT
SOW#	Method 1613B	REVIEWER'S NAME	Wallace Doong
Site ID#	A6NM	COMPLETION DATE	August 26, 2016

SAMPLE NO.	ES16010-012D		
	ES16010-071D		
	ES16010-091D		
	ES16010-093D		

DATA ASSESSMENT SUMMARY

Dioxin/Furan

1. HOLDING TIMES	<u>O</u>
2. GC/MS TUNE/INSTR. PERFORM.	<u>O</u>
3. CALIBRATIONS	<u>O</u>
4. BLANKS	<u>O</u>
5. LABEL COMP./CLEANUP STD. RECOVERY	<u>O</u>
6. MATRIX SPIKE/DUPLICATE/LCS	<u>O</u>
7. OTHER QC	<u>N/A</u>
8. INTERNAL STANDARDS	<u>O</u>
9. COMPOUND ID/QUANTITATION	<u>O</u>
10. PERFORMANCE/COMPLETENESS	<u>O</u>
11. OVERALL ASSESSMENT	<u>O</u>

O = Data had no problems.

M = Data qualified because of major or minor problems.

Z = Data unacceptable.

NA = Not applicable.

ACTION ITEMS:

AREA OF CONCERN:

COMMENTS/CLARIFICATIONS
REGION 6 QA REVIEW

Date of Sampling 7/5/2016 WO # E1600665 SITE Highlands Private Wells
LAB ALS

COMMENTS: This data package consisted of four water samples for Dioxin/Furan analysis following EPA Method 1613B.

S4VEM Review was performed for this data package as requested by the Region. All PCDD/PCDF target compounds were reviewed. The target compound results were less than the laboratory Method Reporting Limits (MRLs). The target compound of concern is 2,3,7,8-TCDD. None of the samples contained 2,3,7,8-TCDD at a concentration above the laboratory MRL.

OVERALL ASSESSMENT: All results were acceptable. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the data package, and the audit results were reported on the Evidence Inventory Checklist. The DST included in this report is the final version.

ORGANIC ACRONYMS

%D	Percent Difference
%RSD	Percent Relative Standard Deviation
ARO	Aroclors
BFB	4-Bromofluorobenzene
BNA	Base/Neutral and Acid
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenylphosphine
DMC	Deuterated Monitoring Compound
DST	Data Summary Table
EDM	EXES Data Manager
GC/ECD	Gas Chromatograph/Electron Capture Detector
GC/MS	Gas Chromatograph/Mass Spectrometer
GPC	Gel Permeation Chromatography
IC	Initial Calibration
INDA(B,C)	Individual Standard Mixture A(or B or C)
IS	Internal Standard
LCS	Laboratory Control Sample
LMVOA	Low/Medium Volatile Organic Analysis
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NFG	National Functional Guidelines
OTR/COC	Organic Traffic Report/Chain of Custody
PAH	Polynuclear Aromatic Hydrocarbon
PE	Performance Evaluation
PEM	Performance Evaluation Mixture
PEST	Pesticides
QA	Quality Assurance
QC	Quality Control
QL	Quantitation Limit
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RRT	Relative Retention Time
RSCC	Regional Sample Control Center
RT	Retention Time
S3VEM	Stage 3 Validation Electronic and Manual (previously called Modified CADRE Review)
S4VEM	Stage 4 Validation Electronic and Manual (previously called Standard Review)
SDG	Sample Delivery Group
SDMC	Semivolatile Deuterated Monitoring Compound
SIM	Selected Ion Monitoring
SMO	Sample Management Office
SOW	Statement of Work
SQL	Sample Quantitation Limit
SVOA	Semivolatile Organic Analysis
TCL	Target Compound List
TCX	Tetrachloro-m-xylene
TIC	Tentatively Identified Compound
TVOA	Trace Volatile Organic Analysis
VDMC	Volatile Deuterated Monitoring Compound
VOA	Volatile Organic Analysis

HEADER DEFINITIONS FOR DIOXIN EXCEL DST

CASE:	Case Number
SDG:	SDG Number
EPASAMP:	EPA Sample Number
LABID:	Laboratory File/Sample ID
MATRIX:	Sample Matrix
ANDATE:	Sample Analysis Date
ANTIME:	Sample Analysis Time
SPLEWT:	Sample Weight
FINALVOL:	Final Sample Extract Volume
CASNUM:	Compound CAS Number
ANALYTE:	Compound Name
CONC:	Compound Concentration
VALDQAL:	Region 6 Organic Data Validation Qualifier (see Organic Data Qualifier Definitions on the next page)
UNITS:	Concentration Units
EMPC:	Estimated Maximum Possible Concentration
EDL:	Estimated Detection Limit
ADJMRL:	Adjusted method reporting limit value
SMPDATE:	Sampling Date
STATLOC:	Station Location

Disclaimer: ESAT verified the accuracy of the information reported in the Excel DST only for the following data fields: CASE, SDG, EPASAMP, MATRIX, ANALYTE, CONC, UNITS, VALDQAL, and ADJCRQL. The data qualifiers in the VALDQAL column indicate the technical usability of the reported results.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U Not detected at reported quantitation limit.
- N Identification is tentative.
- J Estimated value.
- L Reported concentration is below the method reporting limit.
- M Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
- R Unusable.
- ^ High biased. Actual concentration may be lower than the concentration reported.
- v Low biased. Actual concentration may be higher than the concentration reported.
- F+ A false positive exists.
- F- A false negative exists.
- UJ Estimated quantitation limit.
- T Identification is questionable because of absence of other commonly coexisting pesticides.
- C Identification of pesticide or Aroclor has been confirmed by Gas Chromatography/Mass Spectrometer (GC/MS).
- X Identification of pesticide or Aroclor could not be confirmed by GC/MS when attempted.
- * Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

Summary of Dioxins and Furans (with EPA Region 6 Data Review Qualifiers)

Sample ID	Date	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L
Residential	GW _{NS}	30	30	300	300	300	3000	100000	300	1000	100	300	300	300	300	3000	3000	100000	30	
Toxicity Equivalency Factor (TEF)		1.00	1.00	0.10	0.10	0.10	0.01	0.0003	0.10	0.03	0.30	0.10	0.10	0.10	0.10	0.01	0.01	0.0003		
E516010-012D	7/5/2016	<2.24	<5.66	6.78 L.J	<6.74	<5.74	<13.8	<44.2	<1.67	<5.01	<7.61	<6.92	<3.97	<6.74	<5.6	<6.94	6.01 L.J	12.3 L.J	13.60	
E516010-071D	7/5/2016	<2.54	<0.959	<0.323	<0.33	<0.307	<8.84	<44.7	<1.97	<0.785	<0.768	<0.628	<0.597	<0.731	<0.623	<1.87	<0.449	7.01 L.J	0.12	
E516010-091D	7/5/2016	<2.18	<0.953	<0.538	<0.565	<0.517	<6.19	<36.9	<1.34	<0.71	<0.656	<0.513	<0.488	<0.572	<0.486	<1.73	<0.87	4.8 L.J	0.09	
E516010-093D	7/5/2016	<1.35	<1.77	<1.36	<1.33	<1.26	<7.45	<36.5	<0.996	<1.66	<1.66	<1.28	<1.19	<1.45	<1.27	<1.66	<2.53	3.54 L.J	0.09	

Notes:
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INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

WO # E1600665 Date of 7/5/16
Sampling

SDG Nos. To Follow Mod. Ref No. _____

Date Rec. 7/18/16

EPA Lab ID:	ALS			ORIGINALS	YES	NO	N/A
Lab Location:	Houston, TX			CUSTODY SEALS			
Region:	6	Audit No.:	E1600665 (7/5/16)	1. Present on package?			X
Re_Submitted CSF?	Yes	No	X	2. Intact upon receipt?			X
Box No(s):	1			FORM DC-2			
COMMENTS:				3. Numbering scheme accurate?			X
				4. Are enclosed documents listed?			X
				5. Are listed documents enclosed?			X
				FORM DC-1			
				6. Present?			X
				7. Complete?			X
				8. Accurate?			X
				TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)			
				9. Signed?	X		
				10. Dated?	X		
				AIRBILLS/AIRBILL STICKER			
				11. Present?			X
				12. Signed?			X
				13. Dated?			X
				SAMPLE TAGS			
				14. Does DC-1 list tags as being included?			X
				15. Present?			X
				OTHER DOCUMENTS			
			16. Complete?	X			
			17. Legible?	X			
			18. Original?		X		
			18a. If "NO", does the copy indicate where original documents are located?	X			
Over for additional comments.							

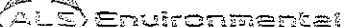
Audited by: *M. Blackmore*
Audited by: _____
Signature

Wallace Doong / ESAT Data Reviewer

Printed Name/Title

Date 7/18/16
Date _____

DC-2



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DATE 1/5 PAGE 1 OF 1

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E1600665

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